APPENDIX H
PROCEDURES FOR USING CHILDREN AND SMALL ADULTS IN SUPPRESSION TESTS

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General Instructions

1. The contractor shall provide children and small adults for static suppression tests when directed by the COTR. These children and small adults shall meet the size requirements as specified in the following check sheets.
2. The use of children and small adults must conform to NHTSA Order 700-1 and the provisions provided in the contract pursuant to NHTSA Order 700-1.
3. The same child or small adult does not need to be used for each static suppression position but there must be a record of which child or small adult is used for each suppression position.
4. Since the identity of the child or small adult is not relevant to the test, the child or small adult shall be identified by a unique identification code provided by the contractor. The child or small adult shall be identified by this code on all relevant data sheets and in the test report. The contractor shall keep the records that relate a specific child or small adult to a specific identification code.
5. The forms in this Appendix shall be used in lieu of the forms in the main section of the test procedure for any suppression tests requiring use of children or small adults in static suppression tests.

DATA SHEET 16H

Suppression Test Using a Representative 3-Year Old Child and Booster Seats (S22)

NHTSA No. _____ Test Date: _____

Laboratory: _____ Test Technician(s): _____

Booster Seat Name, Model, and Manufacture Date: _____

Seat Position: __ Full rearward __ Mid position __ Full forward (Use a separate sheet for each of the three fore-aft positions.)

__ The booster seat has NO visible damage. (S22.1.1)

1. Belted tests with a booster seat. (Booster seats listed in Appendix A, section D)

__1.1 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S22.1.7.1)
__ N/A – No lumbar adjustment

__1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
__ N/A – No additional support adjustment

__1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
__ N/A – No independent fore-aft seat cushion adjustment

__1.4 If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
__ N/A – No independent seat cushion height adjustment.

__1.5. Put the seat in its full rearward position.
__ N/A - The seat does not have a fore-aft adjustment

__1.6 If the seat height is adjustable, put it in the full down position
__N/A – No seat height adjustment

__1.7 Draw a horizontal reference line on the side of the seat cushion.

__1.8 Using only the controls which change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
__ N/A - The seat does not have a fore-aft adjustment.

__1.9 Using only the controls which change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the fore-aft position for this test.
__ N/A - The seat does not have a fore-aft adjustment.
__ Full rearward
__ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: _____
_____
__ Full forward. If the seat must be moved rearward because of booster seat contact with the instrument panel, describe the final location of the seat:
__ N/A – No booster seat contact
Manual seat adjuster: __ detent(s) rearward of the forward most position
Power seat adjuster: __ mm between instrument panel and booster seat (max. allowed is 5 mm.)

__1.10 If seat adjustments other than fore-aft are present and the reference line is no longer horizontal, use those adjustment to maintain the reference line as closely as possible to the horizontal.

__ N/A – No adjustments
Reference line angle as tested _____

__1.11 If the seat height is adjustable, determine the maximum and minimum heights. (Seat height is adjusted in the fore-aft position to be used for the suppression test.) Identify a reference point on the vehicle that does not move with respect to the seat. Locate the maximum height, the minimum height and the mid height with respect to that reference point.
Set the seat at the mid height position. (S22.1.7.4)
__N/A – No seat height adjustment
Max. height from the reference point._____
Min. height from the reference point. _____
Test height from the reference point. _____
Describe location of reference point _____

__1.12 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)
__ N/A – No seat back angle adjustment
Manufacturer's design seat back angle _____
Tested seat back angle _____

__1.13 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
__ N/A – No head restraint adjustment

__1.14 Locate and mark a vertical Plane A through the longitudinal centerline of the booster seat. (S22.2.1.2)

__1.15 Is the passenger seat a bucket seat?
__Yes, go to 1.15.1 and skip 1.15.2.
__No, go to 1.15.2 and skip 1.15.1.

1.15.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B._____

1.15.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.
_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.
_____

__1.16 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S22.2.1.6.1)
__ N/A – No adjustable upper seat belt anchorage
Manufacturer's specified anchorage position. _____
Tested anchorage position _____

__1.17 Read the booster seat owner's manual for installation instructions

__1.18 Place the booster seat in the seat such that Plane A (item 1.14 above) is aligned with Plane B (item 1.15 above). (S22.2.1.4(a)(1))

__1.19 While maintaining the booster seat with Plane A aligned with Plane B, secure the booster seat by following, to the extent possible, the booster seat manufacturer's directions

regarding proper installation of the booster seat. Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S22.1.3) the booster seat to these anchorages. (S22.2.1.4(a)) Do NOT attach any tethers. (S22.1.4)

__1.20 Is the booster seat designed to be secured to the vehicle seat even when empty?
__ Yes – complete item 1.20
__ No – skip the rest of item 1.20
Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the booster seat belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.6.1)
Is there a sheath around the seat belt that interferes with the load cell?
__ Yes __ No
If yes, cut off all or part of the sheath. __ All __ Part

__1.21 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S22.2.1.6.1)
Record seat belt tension _____
__ N/A – The booster seat is not designed to be secured to the vehicle seat even when empty.

__1.22 Child Identification Code: _____

__1.23 The child is wearing a cotton T-shirt. (S29.2)

__1.24 The child is wearing full-length cotton trousers. (S29.2)

__1.25 The child is wearing sneakers. (S29.2)

__1.26 Child weight: _____ (13.4 to18 kg) (S29.1(b)

__1.27 Child height: _____ (89 to 99 cm) (S29.1(b))

__1.28 Position the child in the booster seat such that the child's lower torso is centered on the booster seat cushion and the child's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the child's sides. (S22.2.1.6.2)

__1.29 Attach all belts that come with the booster seat that are appropriate for the child's same height and weight, if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
__ N/A – No seat belts come with the booster seat.

__1.30 Place the Type 2 manual belt around the child and fasten the latch. Remove all slack from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. Apply a 9 to 18 N (2 to 4lb) tension load to the lap belt. Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor. (S22.2.1.6.4)
__ N/A – Booster seat belts that come with the booster seat are used to secure the child and the booster seat is secured with the vehicle's seat belt. (See 1.23)

__1.31 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**

__1.32 Return the ignition switch to the "off" position.

2. Unbelted tests using FMVSS 225 Anchorages with a booster seat. (Booster seats listed in Appendix A, sections D) – Do NOT attach seat belts. (S22.2.1.4 (b)) Do NOT attach any tethers. (S22.1.4(a))
__N/A - Vehicle does not have FMVSS 225 anchorages or booster seat does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.

__2.1 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S22.1.7.1)
__ N/A – No lumbar adjustment

__2.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)

__ N/A – No additional support adjustment

__2.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)

__ N/A – No independent fore-aft seat cushion adjustment

__2.4 If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.

__ N/A – No independent seat cushion height adjustment.

__2.5 Put the seat in its full rearward position.

__ N/A - The seat does not have a fore-aft adjustment

__2.6 If the seat height is adjustable, put it in the full down position

__N/A – No seat height adjustment

__2.7 Draw a horizontal reference line on the side of the seat cushion

__2.8 Using only the controls which change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.

__ N/A - The seat does not have a fore-aft adjustment.

__2.9 Using only the controls which change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the fore-aft position for this test.

__ N/A - The seat does not have a fore-aft adjustment.

__ Full rearward

__ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: _____
_____

__ Full forward. If the seat must be moved rearward because of booster seat contact with the instrument panel, describe the final location of the seat:

__ N/A – No booster seat contact

Manual seat adjuster: __ detent(s) rearward of the forward most position

Power seat adjuster: __ mm between instrument panel and booster seat (max. allowed is 5 mm.)

__2.10 If seat adjustments other than fore-aft are present and the reference line is no longer horizontal, use those adjustment to maintain the reference line as closely as possible to the horizontal.

__ N/A – No adjustments

Reference line angle as tested _____

__2.11 If the seat height is adjustable, determine the maximum and minimum heights. (Seat height is adjusted in the fore-aft position to be used for the suppression test.) Identify a reference point on the vehicle that does not move with respect to the seat. Locate the maximum height, the minimum height and the mid height with respect to that reference point.

Set the seat at the mid height position. (S22.1.7.4)

__N/A – No seat height adjustment

Max. height from the reference point._____

Min. height from the reference point._____

Test height from the reference point. _____

Describe location of reference point _____

__2.12 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)

__ N/A – No seat back angle adjustment

Manufacturer's design seat back angle _____

Tested seat back angle _____

__2.13 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
__ N/A – No head restraint adjustment
__2.14 Read the booster seat and vehicle owner's manuals for installation instructions
__2.15 Attach the booster seat to the FMVSS 225 anchorages according to the instructions in the booster seat and the vehicle owner's manuals. Do NOT attach any tethers. (S22.1.4(a)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
__2.16 Child Identification Code: _____
__2.17 The child is wearing a cotton T-shirt. (S29.2)
__2.18 The child is wearing full-length cotton trousers. (S29.2)
__2.19 The child is wearing sneakers. (S29.2)
__2.20 Child weight: _____ (13.4 to18 kg) (S29.1(b)
__2.21 Child height: _____ (89 to 99 cm) (S29.1(b))
__2.22 Position the child in the booster seat such that the child's lower torso is centered on the booster seat cushion and the child's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the child's sides. (S22.2.1.6.2)
__2.23 Attach all belts that come with the booster seat that are appropriate for the child's height and weight, if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
__2.24 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__2.25 Return the ignition switch to the "off" position.

_____ _____
I certify that I have read and performed each instruction. Date

DATA SHEET 17H
Suppression Test Using a Representative 3-Year Old Child and
Forward Facing Convertible Child Restraints (S22)

NHTSA No. _____ Test Date: _____

Laboratory: _____ Test Technician(s): _____

Child Restraint Name, Model, and Manufacture Date: _____

Seat Position: __ Full rearward __ Mid position __ Full forward (Use a separate sheet for each of the three fore-aft positions.)

__The forward facing child restraint seat has NO visible damage. (S22.1.1)

1. Belted tests with a forward facing child restraint. (Child restraints listed in Appendix A, section C)

__1.1 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S22.1.7.1)
__ N/A – No lumbar adjustment

__1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
__ N/A – No additional support adjustment

__1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
__ N/A – No independent fore-aft seat cushion adjustment

__1.4 If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
__ N/A – No independent seat cushion height adjustment.

__1.5 Put the seat in its full rearward position.
__ N/A - The seat does not have a fore-aft adjustment

__1.6 If the seat height is adjustable, put it in the full down position
__N/A – No seat height adjustment

__1.7 Draw a horizontal reference line on the side of the seat cushion

__1.8 Using only the controls which change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
__ N/A - The seat does not have a fore-aft adjustment.

__1.9 Using only the controls which change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the fore-aft position for this test.
__ N/A - The seat does not have a fore-aft adjustment.
__ Full rearward
__ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: _____
_____
__ Full forward. If the seat must be moved rearward because of child restraint contact with the instrument panel, describe the final location of the seat:
__ N/A – No child restraint contact
Manual seat adjuster: __ detent(s) rearward of the forward most position
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)

__1.10 If seat adjustments other than fore-aft are present and the reference line is no longer horizontal, use those adjustment to maintain the reference line as closely as possible to the horizontal.
__ N/A – No adjustments
Reference line angle as tested _____

__1.11 If the seat height is adjustable, determine the maximum and minimum heights. (Seat height is adjusted in the fore-aft position to be used for the suppression test.) Identify a reference point on the vehicle that does not move with respect to the seat. Locate the maximum height, the minimum height and the mid height with respect to that reference point.
Set the seat at the mid height position. (S22.1.7.4)
__N/A – No seat height adjustment
Max. height from the reference point._____
Min. height from the reference point._____
Test height from the reference point. _____
Describe location of reference point _____

__1.12 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)
__ N/A – No seat back angle adjustment
Manufacturer's design seat back angle _____
Tested seat back angle _____

__1.13 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
__ N/A – No head restraint adjustment

__1.14 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint. (S22.2.1.2)

__1.15 Is the passenger seat a bucket seat?
__Yes, go to 1.15.1 and skip 1.15.2
__No, go to 1.15.2 and skip 1.15.1.

1.15.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B. _____

1.15.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.
_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.
_____

__1.16 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S22.2.1.5.1)
__ N/A – No adjustable upper seat belt anchorage
Manufacturer's specified anchorage position. _____
Tested anchorage position _____

__1.17 Read the child restraint owner's manual for installation instructions

__1.18 Place the child restraint facing forward in the seat such that Plane A (item 1.14 above) is aligned with Plane B (item 1.15 above). (S22.2.1.4 (a)(1))

__1.19 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode. Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S22.1.3) the child restraint to these anchorages. (S22.2.1.4 (a)) Do NOT attach any tethers. (S22.1.4)

__1.20 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.5.1)

Is there a sheath around the seat belt that interferes with the load cell?
__ Yes __ No
If yes, cut off all or part of the sheath. __ All __ Part

__1.21 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S22.2.1.5.2)
Record seat belt tension _____

__1.22 Child Identification Code: _____

__1.23 The child is wearing a cotton T-shirt. (S29.2)

__1.24 The child is wearing full-length cotton trousers. (S29.2)

__1.25 The child is wearing sneakers. (S29.2)

__1.26 Child weight: _____ (13.4 to18 kg) (S29.1 (b)

__1.27 Child height: _____ (89 to 99 cm) (S29.1 (b))

__1.28 Position the child in the child restraint such that the child's lower torso is centered on the child restraint and the child's spine is against the seat back of the child restraint. Place the arms at the child's sides. (S22.2.1.5.2)

__1.29 Attach all belts that come with the child restraint that are appropriate for the child's height and weight, if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the child restraint. (S22.2.1.5.3)

__1.30 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**

__1.31 Return the ignition switch to the "off" position.

2. Unbelted tests using FMVSS 225 Anchorages with a forward facing convertible child restraint. (Child restraints listed in Appendix A, section C) – Do NOT attach seat belts. (S22.2.1.4 (b)) Do NOT attach any tethers. (S22.1.4)
__N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.

__2.1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S22.1.7.1)
__ N/A – No lumbar adjustment

__2.2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
__ N/A – No additional support adjustment

__2.3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
__ N/A – No independent fore-aft seat cushion adjustment

__2.4 If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
__ N/A – No independent seat cushion height adjustment.

__2.5. Put the seat in its full rearward position.
__ N/A - the seat does not have a fore-aft adjustment

__2.6 If the seat height is adjustable, put it in the full down position

__N/A – No seat height adjustment

__2.7 Draw a horizontal reference line on the side of the seat cushion

__2.8 Using only the controls which change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.

__ N/A - The seat does not have a fore-aft adjustment.

__2.9 Using only the controls which change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the fore-aft position for this test.

__ N/A - The seat does not have a fore-aft adjustment.

__ Full rearward

__ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: _____

_____

__ Full forward. If the seat must be moved rearward because of child restraint contact with the instrument panel, describe the final location of the seat:

__ N/A – No child restraint contact

Manual seat adjuster: __ detent(s) rearward of the forward most position

Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)

__2.10 If seat adjustments other than fore-aft are present and the reference line is no longer horizontal, use those adjustment to maintain the reference line as closely as possible to the horizontal.

__ N/A – No adjustments

Reference angle as tested _____

__2.11 If the seat height is adjustable, determine the maximum and minimum heights. (Seat height is adjusted in the fore-aft position to be used for the suppression test.) Identify a reference point on the vehicle that does not move with respect to the seat. Locate the maximum height, the minimum height and the mid height with respect to that reference point.

Set the seat at the mid height position. (S22.1.7.4)

__N/A – No seat height adjustment

Max. height from the reference point._____

Min. height from the reference point._____

Test height from the reference point. _____

Describe location of reference point _____

__2.12 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)

__ N/A – No seat back angle adjustment

Manufacturer's design seat back angle _____

Tested seat back angle _____

__2.13 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.

__ N/A – No head restraint adjustment.

__2.14 Read the child restraint and vehicle owner's manuals for installation instructions

__2.15 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S22.1.4) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)

__2.16 Child Identification Code: _____
__2.17 The child is wearing a cotton T-shirt. (S29.2)
__2.18 The child is wearing full-length cotton trousers. (S29.2)
__2.19 The child is wearing sneakers. (S29.2)
__2.20 Child weight: _____ (13.4 to18 kg) (S29.1 (b)
__2.21 Child height: _____ (89 to 99 cm) (S29.1 (b))
__2.22 Position the child in the child restraint such that the child's lower torso is centered on the child restraint and the child's spine is against the seat back of the child restraint. Place the arms at the child's sides. (S22.2.1.5.2)
__2.23 Attach all belts that come with the child restraint that are appropriate for the child's height and weight, if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the child restraint. (S22.2.1.5.3)
__2.24 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__2.25 Return the ignition switch to the "off" position.

_____ _____
I certify that I have read and performed each instruction. Date

DATA SHEET 18H

Suppression Tests Using an Unbelted Representative 3-Year Old Child

NHTSA No. _____ Test Date: _____

Laboratory: _____ Test Technician(s): _____

Seat Position: __ Full rearward __ Mid position __ Full forward (Use a separate sheet for each of the three fore-aft positions.) (S22.1.2)

Do NOT use seat belts for these tests. (S22.2.2)

1. Sitting on seat with back against seat back (S22.2.2.1)

__1.1 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S22.1.7.1)
__ N/A – No lumbar adjustment

__1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
__ N/A – No additional support adjustment

__1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
__ N/A – No independent fore-aft seat cushion adjustment

__1.4 If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
__ N/A – No independent seat cushion height adjustment.

__1.5 Put the seat in its full rearward position.
__ N/A - The seat does not have a fore-aft adjustment

__1.6 If the seat height is adjustable, put it in the full down position
__N/A – No seat height adjustment

__1.7 Draw a horizontal reference line on the side of the seat cushion.

__1.8 Using only the controls that change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
__ N/A - The seat does not have a fore-aft adjustment.

__1.9 Using only the controls which change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the fore-aft position for this test.
__ N/A - The seat does not have a fore-aft adjustment.
__ Full rearward
__ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: _____
_____
__ Full forward. If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact
Manual seat adjuster: __ detent(s) rearward of the forward most position
Power seat adjuster: __ mm between instrument panel and child (max. allowed is 5 mm.)

__1.10 If seat adjustments other than fore-aft are present and the reference line is no longer horizontal, use those adjustment to maintain the reference line as closely as possible to the horizontal.
__ N/A – No adjustments
Reference line angle as tested _____

__1.11 If the seat height is adjustable, determine the maximum and minimum heights. (Seat height is adjusted in the fore-aft position to be used for the suppression test.) Identify a reference point on the vehicle that does not move with respect to the seat. Locate the maximum height, the minimum height and the mid height with respect to that reference point.
Set the seat at the mid height position. (S22.1.7.4)
__N/A – No seat height adjustment
Max. height from the reference point._____
Min. height from the reference point._____
Test height from the reference point. _____
Describe location of reference point _____

__1.12 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)
__ N/A – No seat back angle adjustment
Manufacturer's design seat back angle _____
Tested seat back angle _____

__1.13 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
__ N/A – No head restraint adjustment

__1.14 Is the passenger seat a bucket seat?
__Yes, go to 1.14.1 and skip 1.14.2.
__No, go to 1.14.2 and skip 1.14.1.

1.14.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B._____

1.14.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.
_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.
_____

__1.15 Child Identification Code: _____
__1.16 The child is wearing a cotton T-shirt. (S29.2)
__1.17The child is wearing full-length cotton trousers. (S29.2)
__1.18 The child is wearing sneakers. (S29.2)
__1.19 Child weight: _____ (13.4 to18 kg) (S29.1 (b)
__1.20 Child height: _____ (89 to 99 cm) (S29.1 (b))
__1.21 Position the child in the seated position and place him/her on the right front outboard seat. (S22.2.2.1(a))
__1.22 Position the child such that its midsagittal plane is coincident with Plane B. (S22.2.2.1(b))
__1.23 Position the child's torso against the seat back. (S22.2.2.1(b))
__1.24 Position the child's thighs against the seat cushion. (S22.2.2.1(b))
__1.25 Allow the legs of the child to extend off the surface of the seat. (S22.2.2.1(c))
If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:

__ N/A – No child contact with the instrument panel.
Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)

__1.26 Rotate the child's upper arms until they contact the seat back. (S22.2.2.1(d))
__1.27 Rotate the child's lower arms until the child's hands contact the seat cushion. (S22.2.2.1(e))
__1.28 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.1(f)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.1(g))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__1.29 Return the ignition switch to the "off" position.

2. Sitting on seat with back against reclined seat back (S22.2.2.2)
__ N/A – No seat back angle adjustment
__2.1 Keep the child and the seat in the same position as item 1 above.
__2.2 Recline the seat back an additional 25 degrees or the closest position that does not exceed 25 degrees. (S22.2.2.2)
Initial seat back angle _____
Final seat back angle _____
__2.3 Verify the child's midsagittal plane is coincident with Plane B. (S22.2.2.1(b))
__2.4 Verify the child's torso is against the seat back. (S22.2.2.1(b))
__2.5 Verify the child's thighs are against the seat cushion. (S22.2.2.1(b))
__2.6 Allow the legs of the child to extend off the surface of the seat. (S22.2.2.1(c))
If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact with the instrument panel.
Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
__2.7 Verify the child's upper arms contact the seat back. (S22.2.2.1(d))
__2.8 Verify the child's hands contact the seat cushion. (S22.2.2.1(e))
__2.9 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.1(f)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.1(g))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__2.10 Return the ignition switch to the "off" position.

3. Sitting on seat with back not against seat back (S22.2.2.3)
__3.1 Keep the child and the seat in the same position as item 2 above.
__3.2 Incline the seat back to the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)
__ N/A – No seat back angle adjustment
Manufacturer's design seat back angle _____
Tested seat back angle _____
__3.3 Verify the child's midsagittal plane is coincident with Plane B (item 1.14). (S22.2.2.3(b))
__3.4 Verify the child's torso is against the seat back.
__3.5 Verify the child's thighs are against the seat cushion. (S22.2.2.3(c))
__3.6 Rotate the child forward until the spine is vertical. (S22.2.2.3(b))

__3.7 Keeping the spine vertical, move the child fore or aft to position the child's back 25 to 150 mm from the seat back as measured horizontally from the child's midsagittal plane at the mid sternum level. (S22.2.2.3(b))
Distance measured from seat back _____ (25 to 150 mm)
__3.8 Allow the legs of the child to extend off the surface of the seat. (S22.2.2.3(d))
If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact with the instrument panel.
Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
__3.9 Position the child's upper arms parallel to the spine. (S22.2.2.3(e))
__3.10 Rotate the child's lower arms until the hands contact the seat cushion. (S22.2.2.3(e))
__3.11 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.3(f)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.3(g))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__3.12 Return the ignition switch to the "off" position.

4. Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
__4.1 Keep the seat in the end position used for 3 above.
__4.2 Is the passenger seat a bucket seat?
__Yes, go to 4.2.1 and skip 4.2.2.
__No, go to 4.2.2 and skip 4.2.1.
4.2.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B._____
4.2.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.
_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.
_____
__4.3 Position the child in the seated position on the right front outboard seat. (S22.2.2.1(a))
__4.4 Position the child such that its midsagittal plane is coincident with Plane B. (S22.2.2.4(a))

__4.5 Position the child in the seated position forward in the seat such that the legs are vertical and the back of the legs rest against the front of the seat with the spine vertical. If the child's feet contact the floor pan raising part of the thighs off the seat cushion, rotate the legs forward until the child's thighs are resting on the seat cushion with the feet positioned flat on the floor pan and the child's spine vertical. (S22.2.2.4(b))
If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact with the instrument panel.
Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)

__4.6 Position the child's upper arms parallel to the spine. (S22.2.2.4(c))

__4.7 Rotate the child's lower arms until the hands contact the seat cushion. (S22.2.2.4(d))

__4.8 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.4(e)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.4(f))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**

__4.9 Return the ignition switch to the "off" position.

5. Standing on seat, facing forward (S22.2.2.5)

__5.1 Keep the seat in the end position used for 4 above.

__5.2 Is the passenger seat a bucket seat?
__Yes, go to 5.2.1 and skip 5.2.2.
__No, go to 5.2.2 and skip 5.2.1.

5.2.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B. _____

5.2.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.
_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.
_____

__5.3 Position the child in a standing position on the right front outboard seat cushion facing the front of the vehicle with the midsagittal plane coincident with Plane B and with the heels of the child's feet in contact with the seat back. (S22.2.2.5(a))

__5.4 Rest the child against the seat back, with the arms parallel to the spine. (S22.2.2.5(b))

__5.5 If the seat back must be reclined because of child contact with the roof, describe the final location of the seat:
__ N/A – No child contact with the roof.
Manual seat back recliner: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the roof.)
Power seat adjuster: __ mm between roof and child head (max. allowed is 5 mm.)

__5.6 Start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.5(e)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.5(f))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__5.7 Return the ignition switch to the “off” position.

6. Kneeling on seat facing forward (S22.2.2.6)
__6.1 Keep the seat in the end position used for 5 above with the seat back angle adjustment necessary from 6.2.
__6.2 The seat back angle, if adjustable, is set at the manufacturer’s nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)
__ N/A – No seat back angle adjustment
__ N/A – The seat back angle was not adjusted in 5.5 above.
Manufacturer’s design seat back angle _____
Tested seat back angle _____
__6.3 Is the passenger seat a bucket seat?
__Yes, go to 6.3.1 and skip 6.3.2.
__No, go to 6.3.2 and skip 6.3.1.
6.3.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B. _____
6.3.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.
_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.
_____
__6.4 Position the child in a kneeling position on the right front outboard seat cushion facing the front of the vehicle with the midsagittal plane coincident with Plane B, with the toes at the intersection of the seat back and seat cushion and with the spine vertical. (S22.2.2.6 (a) and (b))
__6.5 Place the arms parallel to the spine. (S22.2.2.6 (b))
__6.6 Start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.6 (d)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.6 (e))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__6.7 Return the ignition switch to the “off” position.

7. Kneeling on seat facing rearward (S22.2.2.7)
__7.1 Keep the seat in the end position used for 6 above.
__7.2 Is the passenger seat a bucket seat?
__Yes, go to 7.2.1 and skip 7.2.2.
__No, go to 7.2.2 and skip 7.2.1.
7.2.1 Bucket seats:

Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B. _____

7.2.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.

_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.

_____

__7.3 Position the child in a kneeling position on the right front outboard seat cushion facing the rear of the vehicle with the midsagittal plane coincident with Plane B, with the head and torso in contact with the seat back. (S22.2.2.7(a) and (b))
__7.4 Place the legs so that they contact the seat as much as possible. (S22.2.2.7(b))
__7.5 Place the arms parallel to the spine. (S22.2.2.7(b))
__7.6 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.7 (c)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.7(d))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__7.7 Return the ignition switch to the "off" position.

8. Lying on seat (S22.2.2.8)
__8.1 Does the front seat have 3 or more designated seating positions?
__Yes, continue with this section.
__No, this form is complete.
__8.2 Keep the seat in the end position used for 7 above.
__8.3 Lay the child on the right front outboard seat with the spine perpendicular to the vehicle's longitudinal axis, with the child facing forward and the head towards the right front door. (S22.2.2.8(a)(2), & S22.2.2.8(a)(5), and S22.2.2.8(a)(6))
__8.4 Position the child so that the midsagittal plane is horizontal and a plane passing through the two shoulder joints of the child is vertical. (S22.2.2.8(a)(1) and S22.2.2.8(a)(4))
__8.5 Position the child's arms parallel to the spine. (S22.2.2.8(a)(3))
__8.6 Position the child so that he/she is as far back in the seat as possible. (S22.2.2.8(a)(8))
__8.7 Position the child so that the topmost point of the child's head is 50 to 100 mm from the vehicle door. (S22.2.2.8(a)(7))
__8.8 Rotate both thighs as much as possible toward the chest of the child and rotate the legs as much as possible against the thighs. (S22.2.2.8(b))
__8.9 Position the child's upper left arm perpendicular to the longitudinal centerline of the vehicle and rotate the lower left arm about the elbow joint and toward the child's head until movement is obstructed. (S22.2.2.8(c))
__8.10 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.8(d)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.8(e))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__8.11 Return the ignition switch to the "off" position.

_____ _____
I certify that I have read and performed each instruction. Date

DATA SHEET 19H

Suppression Test Using a Representative 6-Year-Old Child and Booster Seats (S24.2.1)

NHTSA No. _____ Test Date: _____

Laboratory: _____ Test Technician(s): _____

Booster Seat Name, Model, Manufacture Date: _____

Seat Position: __ Full rearward __ Mid position __ Full forward (Use a separate sheet for each of the three fore-aft positions.)

__ The booster seat has NO visible damage. (S24.1.1)

1. Belted tests with a booster seat. (Booster seats listed in Appendix A, section D, S24.1.1))

__1.1 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S22.1.7.1)
__ N/A – No lumbar adjustment

__1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
__ N/A – No additional support adjustment

__1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
__ N/A – No independent fore-aft seat cushion adjustment

__1.4 If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
__ N/A – No independent seat cushion height adjustment.

__1.5. Put the seat in its full rearward position.
__ N/A - The seat does not have a fore-aft adjustment

__1.6 If the seat height is adjustable, put it in the full down position
__N/A – No seat height adjustment

__1.7 Draw a horizontal reference line on the side of the seat cushion.

__1.8 Using only the controls which change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
__ N/A - The seat does not have a fore-aft adjustment.

__1.9 Using only the controls which change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the fore-aft position for this test.
__ N/A - The seat does not have a fore-aft adjustment.
__ Full rearward
__ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: _____
_____
__ Full forward. If the seat must be moved rearward because of booster seat contact with the instrument panel, describe the final location of the seat:
__ N/A – No booster seat contact
Manual seat adjuster: __ detent(s) rearward of the forward most position
Power seat adjuster: __ mm between instrument panel and booster seat (max. allowed is 5 mm.)

__1.10 If seat adjustments other than fore-aft are present and the reference line is no longer horizontal, use those adjustment to maintain the reference line as closely as possible to the horizontal.
__ N/A – No adjustments
Reference angle as tested _____

__1.11 If the seat height is adjustable, determine the maximum and minimum heights. (Seat height is adjusted in the fore-aft position to be used for the suppression test.) Identify a reference point on the vehicle that does not move with respect to the seat. Locate the maximum height, the minimum height and the mid height with respect to that reference point.
Set the seat at the mid height position. (S22.1.7.4)
__N/A – No seat height adjustment
Max. height from the reference point._____
Min. height from the reference point. _____
Test height from the reference point. _____
Describe location of reference point _____

__1.12 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S24.1.2 and S8.1.3)
__ N/A – No seat back angle adjustment
Manufacturer's design seat back angle _____
Tested seat back angle _____

__1.13 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
__ N/A – No head restraint adjustment

__1.14 Locate and mark a vertical Plane A through the longitudinal centerline of the booster seat. (S22.2.1.2)

__1.15 Is the passenger seat a bucket seat?
__Yes, go to 1.15.1 and skip 1.15.2.
__No, go to 1.15.2 and skip 1.15.1.

1.15.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B. _____

1.15.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.

_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.

_____

__1.16 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S22.2.1.6.1)
__ N/A – No adjustable upper seat belt anchorage
Manufacturer's specified anchorage position. _____
Tested anchorage position _____

__1.17 Read the booster seat owner's manual for installation instructions

__1.18 Place the booster seat in the seat such that Plane A (item 1.15 above) is aligned with Plane B (item 1.16 above). (S22.2.1.4(a)(1))

__1.19 While maintaining the booster seat with Plane A aligned with Plane B, secure the booster seat by following, to the extent possible, the booster seat manufacturer's directions regarding proper installation of the booster seat. Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S22.1.3) the booster seat to these anchorages. (S22.2.1.4(a)) Do NOT attach any tethers. (S24.1.4)

__1.20 Is the booster seat designed to be secured to the vehicle seat even when empty when used for a child the same height and weight as the six year-old child (45 in (114 cm), 51.6 lb (23.4 kg))?

__ Yes – complete item 1.20

__ No – skip the rest of item 1.20

Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the booster seat belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.6.1)

Is there a sheath around the seat belt that interferes with the load cell?

__ Yes __ No

If yes, cut off all or part of the sheath. __ All __ Part

__1.21 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S22.2.1.6.1)

Record seat belt tension _____

__ N/A – The booster seat is not designed to be secured to the vehicle seat even when empty when used for a child the same height and weight as the 6 year-old child (45 in (114 cm), 51.6 lb (23.4 kg)).

__1.22 Child Identification Code: _____

__1.23 The child is wearing a cotton T-shirt. (S29.2)

__1.24 The child is wearing full-length cotton trousers. (S29.2)

__1.25 The child is wearing sneakers. (S29.2)

__1.26 Child weight: _____ (21 to25.6 kg) (S29.1 (c)

__1.27 Child height: _____ (114 to 124.5 cm) (S29.1 (c))

__1.28 Position the child in the booster seat such that the child's lower torso is centered on the booster seat cushion and the child's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the child's sides. (S22.2.1.6.2)

__1.29 Attach all belts that come with the booster seat that are appropriate for the child's height and weight, if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)

__ N/A – No seat belts come with the booster seat.

__ N/A – Seat belts that come with the booster seat are not applicable to a child this size and weight (45 in (114 cm), 51.6 lb (23.4 kg))

__1.30 Place the Type 2 manual belt around the child and fasten the latch. Remove all slack from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. Apply a 9 to 18 N (2 to 4lb) tension load to the lap belt. Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor. (S22.2.1.6.4)

__ N/A – Booster seat belts that come with the booster seat are used to secure the child and the booster seat is secured with the vehicle's seat belt.

__1.31 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

__Air Bag Suppressed – Pass

__Air Bag Not Suppressed – **FAIL**

__1.32 Return the ignition switch to the "off" position.

2. Unbelted tests using FMVSS 225 Anchorages with a booster seat. (Booster seats listed in Appendix A, sections D) – Do NOT attach seat belts. (S24.1.3) Do NOT attach any tethers. (S24.1.4)
   __N/A - Vehicle does not have FMVSS 225 anchorages or booster seat does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.

__2.1 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S22.1.7.1)
__ N/A – No lumbar adjustment

__2.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
__ N/A – No additional support adjustment

__2.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
__ N/A – No independent fore-aft seat cushion adjustment

__2.4 If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
__ N/A – No independent seat cushion height adjustment.

__2.5 Put the seat in its full rearward position.
__ N/A - The seat does not have a fore-aft adjustment

__2.6 If the seat height is adjustable, put it in the full down position
__N/A – No seat height adjustment

__2.7 Draw a horizontal reference line on the side of the seat cushion.

__2.8 Using only the controls which change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
__ N/A - The seat does not have a fore-aft adjustment.

__2.9 Using only the controls which change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the fore-aft position for this test.
__ N/A - The seat does not have a fore-aft adjustment.
__ Full rearward
__ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: _____
_____
__ Full forward. If the seat must be moved rearward because of booster seat contact with the instrument panel, describe the final location of the seat:
__ N/A – No booster seat contact
Manual seat adjuster: __ detent(s) rearward of the forward most position
Power seat adjuster: __ mm between instrument panel and booster seat (max. allowed is 5 mm.)

__2.10 If seat adjustments other than fore-aft are present and the reference line is no longer horizontal, use those adjustment to maintain the reference line as closely as possible to the horizontal.
__ N/A – No adjustments
Reference line angle as tested _____

__2.11 If the seat height is adjustable, determine the maximum and minimum heights. (Seat height is adjusted in the fore-aft position to be used for the suppression test.) Identify a reference point on the vehicle that does not move with respect to the seat. Locate the maximum height, the minimum height and the mid height with respect to that reference point.
Set the seat at the mid height position. (S22.1.7.4)
__N/A – No seat height adjustment
Max. height from the reference point._____
Min. height from the reference point._____
Test height from the reference point. _____
Describe location of reference point _____

__2.12 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S24.1.2 and S8.1.3)
__ N/A – No seat back angle adjustment
Manufacturer's design seat back angle _____
Tested seat back angle _____

__2.13 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
__ N/A – No head restraint adjustment

__2.14 Read the booster seat and vehicle owner's manuals for installation instructions

__2.15 Attach the booster seat to the FMVSS 225 anchorages according to the instructions in the booster seat and the vehicle owner's manuals. Do NOT attach any tethers. (S22.1.4) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)

__2.16 Child Identification Code: _____

__2.17 The child is wearing a cotton T-shirt. (S29.2)

__2.18 The child is wearing full-length cotton trousers. (S29.2)

__2.19 The child is wearing sneakers. (S29.2)

__2.20 Child weight: _____ (21 to25.6 kg) (S29.1 (c)

__2.21 Child height: _____ (114 to 124.5 cm) (S29.1 (c))

__2.22 Position the child in the booster seat such that the child's lower torso is centered on the booster seat cushion and the child's back is against the seat back of the booster seat or if there is no booster seat back the vehicle seat back. Place the arms at the child's sides. (S22.2.1.6.2)

__2.23 Attach all belts that come with the booster seat that are appropriate for the child's height and weight, if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
__ N/A – No seat belts come with the booster seat.
__ N/A – Seat belts that come with the booster seat are not applicable to a child this height and weight (45 in (114 cm), 51.6 lb (23.4 kg))

__2.24 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**

__2.25 Return the ignition switch to the "off" position.

_____ _____
I certify that I have read and performed each instruction. Date

DATA SHEET 20H

Suppression Tests Using an Unbelted Representative 6-Year-Old Child (S24.2.1)

NHTSA No. _____ Test Date: _____

Laboratory: _____ Test Technician(s): _____

Seat Position: __ Full rearward __ Mid position __ Full forward (Use a separate sheet for each of the three fore-aft positions.) (S24.1.2)

Do NOT use seat belts for these tests. (S22.2.2)

1. Sitting on seat with back against seat back (S22.2.2.1)

__1.1 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S22.1.7.1)
__ N/A – No lumbar adjustment

__1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
__ N/A – No additional support adjustment

__1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
__ N/A – No independent fore-aft seat cushion adjustment

__1.4 If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
__ N/A – No independent seat cushion height adjustment.

__1.5 Put the seat in its full rearward position.
__ N/A - The seat does not have a fore-aft adjustment

__1.6 If the seat height is adjustable, put it in the full down position
__N/A – No seat height adjustment

__1.7 Draw a horizontal reference line on the side of the seat cushion.

__1.8 Using only the controls which change the seat in the fore-aft direction, mark the fore-aft seat positions. Mark the side of the seat and a reference position directly below on a part of the vehicle that does not adjust. For manual seats, move the seat forward one detent at a time and mark each detent as was done for the full rearward position. For power seats, mark only the full rearward, middle, and full forward positions. Label three of the positions with the following: F for full forward, M for mid-position (if there is no mid position, label the closest adjustment position to the rear of the mid-point), and R for full rearward.
__ N/A - The seat does not have a fore-aft adjustment.

__1.9 Using only the controls which change the seat in the fore-aft direction, place the seat in the full rearward position and then place the seat in the fore-aft position for this test. (S22.1.2)
__ N/A - The seat does not have a fore-aft adjustment.
__ Full rearward
__ Mid position. If there is no mid position, put the seat in the closest adjustment position to the rear of the midpoint. Describe the location of the seat: _____
_____
__ Full forward. If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact
Manual seat adjuster: __ detent(s) rearward of the forward most position
Power seat adjuster: __ mm between instrument panel and child (max. allowed is 5 mm.)

__1.10 If seat adjustments other than fore-aft are present and the reference line is no longer horizontal, use those adjustment to maintain the reference line as closely as possible to the horizontal.
__ N/A – No adjustments
Reference line angle as tested _____

__1.11 If the seat height is adjustable, determine the maximum and minimum heights. (Seat height is adjusted in the fore-aft position to be used for the suppression test.) Identify a reference point on the vehicle that does not move with respect to the seat. Locate the maximum height, the minimum height and the mid height with respect to that reference point.
Set the seat at the mid height position. (S24.1.2)
__N/A – No seat height adjustment
Max. height from the reference point._____
Min. height from the reference point._____
Test height from the reference point. _____
Describe location of reference point _____

__1.12 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S24.1.2 and S8.1.3)
__ N/A – No seat back angle adjustment
Manufacturer's design seat back angle _____
Tested seat back angle _____

__1.13 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
__ N/A – No head restraint adjustment

__1.14 Is the passenger seat a bucket seat?
__Yes, go to 1.14.1 and skip 1.14.2.
__No, go to 1.14.2 and skip 1.14.1.

1.14.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B._____

1.14.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.

_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.

_____

__1.15 Position the child in the seated position and place it on the right front outboard seat. (S22.2.2.1(a))

__1.16 Position the child such that its midsagittal plane is coincident with Plane B. (S22.2.2.1(b))

__1.17 Position the child's torso against the seat back. (S22.2.2.1(b))

__1.18 Position the child's thighs against the seat cushion. (S22.2.2.1(b))

__1.19 Allow the legs of the child to extend off the surface of the seat. (S22.2.2.1(c))
If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact with the instrument panel.

Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)

__1.20 Rotate the child's upper arms until they contact the seat back. (S22.2.2.1(d))
__1.21 Rotate the child's lower arms until the child's hands contact the seat cushion. (S22.2.2.1(e))
__1.22 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.1(f)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.1(g))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__1.23 Return the ignition switch to the "off" position.

2. Sitting on seat with back against reclined seat back (S22.2.2.2)
__ N/A – No seat back angle adjustment
__2.1 Keep the child and the seat in the same position as item 1 above.
__2.2 Recline the seat back an additional 25 degrees or the closest position that does not exceed 25 degrees. (S22.2.2.2)
Initial seat back angle _____
Final seat back angle _____
__2.3 Verify the child's midsagittal plane is coincident with Plane B. (S22.2.2.1(b))
__2.4 Verify the child's torso is against the seat back. (S22.2.2.1(b))
__2.5 Verify the child's thighs are against the seat cushion. (S22.2.2.1(b))
__2.6 Allow the legs of the child to extend off the surface of the seat. (S22.2.2.1(c))
If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact with the instrument panel.
Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
__2.7 Verify the child's upper arms contact the seat back. (S22.2.2.1(d))
__2.8 Verify the child's hands contact the seat cushion. (S22.2.2.1(e))
__2.9 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.1(f)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.1(g))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__2.10 Return the ignition switch to the "off" position.

3. Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
__3.1 Keep the seat in the end position used for 1 above.
__3.2 Incline the seat back to the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)
__ N/A – No seat back angle adjustment
Manufacturer's design seat back angle _____
Tested seat back angle _____
__3.3 Is the passenger seat a bucket seat?
__Yes, go to 3.3.1 and skip 3.3.2.
__No, go to 3.3.2 and skip 3.3.1.

3.3.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B. _____

3.3.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.

_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.

_____

__3.4 Position the child in the seated position and place him/her on the right front outboard seat. (S22.2.2.1(a))
__3.5 Position the child such that its midsagittal plane is coincident with Plane B. (S22.2.2.4(a))
__3.6 Position the child in the seated position forward in the seat such that the legs are vertical and the back of the legs rest against the front of the seat with the spine vertical. If the child's feet contact the floor pan raising part of the thighs off the seat cushion, rotate the legs forward until the child's thighs are resting on the seat cushion with the feet positioned flat on the floor pan and the child's spine vertical. (S22.2.2.4(b))
If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact with the instrument panel.
Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
__3.7 Position the child's upper arms parallel to the spine. (S22.2.2.4(c))
__3.8 Rotate the child's lower arms until the hands contact the seat cushion. (S22.2.2.4(d))
__3.9 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.4(e)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.4(f))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__3.10 Return the ignition switch to the "off" position.

4. Sitting back in the seat and leaning on the right front passenger door (S24.2.3)
__4.1 Keep the seat in the end position used for 2 above.
__4.2 Is the passenger seat a bucket seat?
__Yes, go to 4.2.1 and skip 4.2.2.
__No, go to 4.2.2 and skip 4.2.1.

4.2.1 Bucket seats:
Locate and mark a vertical Plane B through the longitudinal centerline of the seat. (S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle.
Record the width of the seat. _____
Record the distance from the edge of the seat to Plane B. _____

4.2.2 Bench seats:
Locate and mark a vertical Plane B through the right front outboard vehicle seat parallel to the vehicle longitudinal centerline the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S22.2.1.3)
Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.

_____
Record the distance from the longitudinal centerline of the vehicle to Plane B.

_____

__4.3 Position the child in the seated position and place him/her on the right front outboard seat. (S24.2.3 (a))
__4.4 Position the child such that its midsagittal plane is coincident with Plane B. (S24.2.3(a))
__4.5 Position the child's back against the seat back and thighs on the seat cushion. (S24.2.3(b))
__4.6 Allow the legs and feet to extend off the surface of the seat. If this positioning of the child's legs is prevented by contact with the instrument panel, move the seat rearward. (S24.2.3(c))
If the seat must be moved rearward because of child contact with the instrument panel, describe the final location of the seat:
__ N/A – No child contact with the instrument panel.
Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
__4.7 Rotate the child's upper arms toward the seat back until they make contact. (S24.2.3(d))
__4.8 Rotate the child's lower arms down until they contact the seat. (S24.2.3(e))
__4.9 Close the vehicle's passenger-side door and then start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system. (S24.2.3(f))
__4.10 Push against the child's left shoulder to lean the child against the door; close all remaining doors. (S24.2.3(g))
__4.11 Wait 10 seconds, and then check whether the air bag is suppressed. (S24.2.3(h))
__Air Bag Suppressed – Pass
__Air Bag Not Suppressed – **FAIL**
__4.11 Return the ignition switch to the "off" position.

_____ _____
I certify that I have read and performed each instruction. Date

DATA SHEET 25H

Test of Reactivation of the Passenger Air Bag System with an Unbelted Representative 5th Percentile Female (S20.3, 22.3, S24.3)

NHTSA No. _____ Test Date: _____

Laboratory: _____ Test Technician(s): _____

Seat Position: __ Full rearward __ Mid position __ Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (S20.3.1, 22.3.1, S24.3.1)

Do NOT use seat belts for these tests.

1. This reactivation test is being performed after the following suppression test:
__ Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section __ of the data sheet
__ Suppression Test Using Newborn Infant Dummy (S20)
After section __ of the data sheet
__ Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section __ of the data sheet
__ Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section __ of the data sheet
__ Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section __ of the data sheet
__ Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section __ of the data sheet
__ Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section __ of the data sheet

__2. Leave the seat in the position used for the suppression test. (The seat back is not reclined as it would be for positioning for a crash test.)
__3. Human Identification Code: _____
__4. The human is wearing a cotton T-shirt. (S29.2)
__5. The human is wearing full-length cotton trousers. (S29.2)
__6. The human is wearing sneakers. (S29.2)
__7. Human weight: _____ (46.7 to 51.25 kg) (S29.1(f)
__8. Human height: _____ (139.7 to 150 cm) (S29.1(f))
__9. Position the human in the center of the seat with the pelvis touching the seat back and the back against the seat back.
__10. Verify the human's midsagittal plane is vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
__11. Verify the transverse distance between the centers of the front of the knees is 160 to 170 mm (6.3 to 6.7 inches). Center the knee separation with respect to the seat centerline. (S16.3.3.1.6)
Record Knee Separation _____ mm
__12. If needed, extend the legs until the feet do not contact the floor pan. The thighs are resting on the seat cushion. (S16.3.3.1.8)
__13. If the human contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest detent position which does not cause human contact. (S16.3.3.1.8)
__ N/A No contact
__ Human contact. Clearance set at maximum of 5mm
Measured Clearance_____ mm
__ Human Contact. Seat set at nearest detent position.
Seat position ___ detent positions rearward of full forward
(full forward is position zero)
__14. Passenger foot positioning. (Indicate final position achieved) (S16.3.3.2)

__14.1 Place feet flat on the toe board. OR
__14.2 If the feet cannot be placed flat on the toe board, the feet are perpendicular to the lower leg, and the heel is as far forward as possible and resting on the floor pan. OR
__14.3 If the heels do not touch the floor pan, the legs are vertical and the feet parallel to the floor pan

__15. Passenger arm/hand positioning. (S16.3.3.3)
__15.1 Place the human's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.2.3.1)
__15.2 Place the palms of the human in contact with the outer part of the thighs (S16.3.3.3.2)
__15.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)

__16. Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
__Air Bag Suppressed – **FAIL**
__Air Bag Not Suppressed – Pass

__17. Return the ignition switch to the "off" position.

_____ _____
I certify that I have read and performed each instruction. Date